The Depository Trust & Clearing Corporation

Consolidated Financial Statements as of September 30, 2019 and December 31, 2018 and for the three and nine months ended September 30, 2019 and 2018

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CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION (UNAUDITED)

	As of	September 30,	As of	December 31,
(In thousands, except share data)		2019		2018
ASSETS				
CURRENT ASSETS:				
Cash and cash equivalents	\$	8,624,669	\$	8,641,036
Participants' segregated cash		52,350		77,988
Short-term investments		900,000		800,000
Accounts receivable - net of allowance for doubtful accounts of \$260 and \$1,650		171,331		177,880
as of September 30, 2019 and December 31, 2018, respectively		171,331		177,000
		27 242 050		27 (22 122
Participants' and Clearing Funds		37,243,959		36,622,122
Other Participants' assets		1,407,484		518,115
Other current assets		134,551		133,960
Total current assets		48,534,344		46,971,101
NON-CURRENT ASSETS:				
Premises and equipment - net of accumulated depreciation of \$300,267 and \$399,846		211,023		213,111
as of September 30, 2019 and December 31, 2018, respectively		211,023		213,111
Goodwill		57.600		57.600
		57,699		57,699
Intangible assets - net of accumulated amortization of \$721,601 and \$839,236		341,708		319,119
as of September 30, 2019 and December 31, 2018, respectively		10.120		10.401
Equity method investments		10,130		10,491
Operating lease right-of-use-asset		243,215		_
Other non-current assets		314,736		319,579
Total non-current assets	-	1,178,511		919,999
TOTAL ASSETS	\$	49,712,855	\$	47,891,100
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LIABILITIES AND SHAREHOLDERS' EQUITY				
CURRENT LIABILITIES:				
Commercial paper - net of unamortized discount of \$25,049 and \$43,856	\$	7,367,818	\$	7,436,141
as of September 30, 2019 and December 31, 2018, respectively				
Current portion of long-term debt		7,123		2,650
Current portion of pension and postretirement benefits		16,608		16,608
Current portion of operating lease liability		24,957		_
Accounts payable and accrued expenses		105,828		104,013
Participants' and Clearing Funds		37,243,959		36,622,122
Payable to Participants		1,459,834		596,103
Other current liabilities		205,819		260,677
Total current liabilities		46,431,946		45,038,314
				-
NON-CURRENT LIABILITIES:				
Non-current portion of long-term debt		36,643		33,725
Non-current portion of pension and postretirement benefits		179,638		198,492
Non-current operating lease liability		271,156		_
Other non-current liabilities		280,787		288,334
Total non-current liabilities		768,224		520,551
Total liabilities		47,200,170		45,558,865
	-			,
COMMITMENTS AND CONTINGENCIES (Note 2)				
CHA PENAL PERCHANA				
SHAREHOLDERS' EQUITY				
Preferred stock:				
Series A, \$0.50 par value - 10,000 shares authorized, issued (above par), and outstanding		300		300
Series B, \$0.50 par value - 10,000 shares authorized, issued (above par), and outstanding		300		300
Series C, \$0.50 par value - 1,600 shares authorized, issued (above par), and outstanding		390,516		390,516
Common stock, \$100 par value - 80,000 shares authorized, 50,908 shares issued and outstanding		5,091		5,091
Additional paid-in capital		411,065		411,065
Retained earnings		1,753,359		1,571,298
Accumulated other comprehensive loss, net of tax		(197,946)		(196,335)
Non-controlling interests		150,000		150,000
Total shareholders' equity		2,512,685		2,332,235
TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY	<u>.</u> \$	49,712,855	\$	47,891,100
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CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

	For	the three months	ended	September 30,	Fo	r the nine months	ended	September 30,
(In thousands)		2019		2018		2019		2018
REVENUES								
Settlement and asset services	\$	118,188	\$	110,712	\$	344,780	\$	340,565
Clearing services		157,229		140,285		469,063		443,127
Matching and data services		67,689		67,149		204,752		206,308
Repository and derivatives services		71,467		71,647		218,180		218,903
Wealth management services		25,531		27,406		77,684		83,868
Other services		9,949		10,297		30,119		33,033
Investment income		4,098		4,555		13,272		4,975
Total revenues		454,151		432,051		1,357,850		1,330,779
EXPENSES								
Employee compensation and related benefits		190,091		159,749		552,522		502,542
Information technology		44,735		40,584		130,702		117,890
Professional and other services		89,639		89,109		250,559		267,046
Occupancy		12,198		11,795		35,073		35,223
Depreciation and amortization		34,616		38,542		105,434		121,785
General and administrative		15,162		8,256		38,637		28,455
Impairment of Intangible assets		968		_		2,968		_
Total expenses	-	387,409		348,035		1,115,895		1,072,941
Total operating income		66,742		84,016		241,955		257,838
NON-OPERATING INCOME (EXPENSE)								
Interest income		134,223		117,439		443,684		313,247
Refunds to Participants		(86,197)		(80,240)		(290,869)		(229,627)
Interest expense		(51,693)		(42,064)		(164,712)		(97,890)
Net income (loss) from Equity method investments		185		123		150		(4,543)
Other non-operating income		7,556		8,706		29,408		33,931
Total non-operating income		4,074		3,964		17,661		15,118
Income before taxes		70,816		87,980		259,616		272,956
Provision (benefit) for income taxes		18,126		(9,884)		67,805		39,287
Net income	\$	52,690	\$	97,864	\$	191,811	\$	233,669

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)

	For th	ne three months	ended Se	eptember 30,	For	the nine months	ended So	eptember 30,
(In thousands)		2019		2018		2019		2018
Net income	\$	52,690	\$	97,864	\$	191,811	\$	233,669
OTHER COMPREHENSIVE INCOME (LOSS) - Net of tax:								
Foreign currency translation		(2,157)		(652)		(1,611)		(5,976)
Other comprehensive income (loss)		(2,157)		(652)		(1,611)		(5,976)
Comprehensive income	\$	50,533	\$	97,212	\$	190,200	\$	227,693

The Notes to Consolidated Financial Statements are an integral part of these statements.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY (UNAUDITED)

Accumulated Other	
Comprehensive Income (Loss),	

										Net o	f Ta	ax			
			Duof	erred Stock		Common		Paid-In	Retained	fined Benefit ension and		Foreign Currency	Non- controlling	Sh.	Total areholders'
(In thousands)	Sei	ies A		Series B	Series C	Stock	_	Capital	Earnings	other Plans		Translation	Interests		Equity
BALANCE - January 1, 2019	\$	300	\$	300	\$ 390,516	\$ 5,091	\$	411,065	\$ 1,571,298	\$ (189,472)	\$	(6,863)	\$ 150,000	\$	2,332,235
Net income		_		_	_	_		_	61,956	_		_	_		61,956
Other comprehensive income		_		_	_	_		_	_	_		212	_		212
BALANCE - March 31, 2019	\$	300	\$	300	\$ 390,516	\$ 5,091	\$	411,065	\$ 1,633,254	\$ (189,472)	\$	(6,651)	\$ 150,000	\$	2,394,403
Net income		_		_	_	_		_	77,165	_		_	_		77,165
Other comprehensive income		_		_	_	_		_	_	_		334	_		334
Dividend on preferred stock						 _			(9,750)	 		<u> </u>			(9,750)
BALANCE - June 30, 2019	\$	300	\$	300	\$ 390,516	\$ 5,091	\$	411,065	\$ 1,700,669	\$ (189,472)	\$	(6,317)	\$ 150,000	\$	2,462,152
Net income		_		_	_	_		_	52,690	_		_	_		52,690
Other comprehensive loss					 	_		<u> </u>	 <u> </u>	 <u> </u>		(2,157)			(2,157)
BALANCE - September 30, 2019	\$	300	\$	300	\$ 390,516	\$ 5,091	\$	411,065	\$ 1,753,359	\$ (189,472)	\$	(8,474)	\$ 150,000	\$	2,512,685

Accumulated Other Comprehensive Income (Loss), Net of Tax

(In thousands)		Series A	Pre	eferred Stock Series B	Series C		Common Stock		Paid-In Capital		Retained Earnings		Pefined Benefit Pension and Other Plans	Foreign Currenc Translatio	y		Non- controlling Interests	Sh	Total areholders' Equity
	_		_			_		_		_		_				_		_	
BALANCE - January 1, 2018	\$	300	\$	300	\$ 390,516	\$	5,091	\$	411,065	\$	1,261,309	\$	(188,925)	\$	(429)	\$	148,440	\$	2,027,667
Net income		_		_	_		_		_		70,653		_		_		_		70,653
Other comprehensive income				<u> </u>			<u> </u>		<u> </u>		<u> </u>		<u> </u>		906				906
BALANCE - March 31, 2018	\$	300	\$	300	\$ 390,516	\$	5,091	\$	411,065	\$	1,331,962	\$	(188,925)	\$	477	\$	148,440	\$	2,099,226
Net income		_		_	_		_		_		65,151		_		_		_		65,151
Other comprehensive loss		_		_	_		_		_		_		_	(6	,230)		_		(6,230)
Dividend on preferred stock				<u> </u>					<u> </u>		(9,750)				_				(9,750)
BALANCE - June 30, 2018	\$	300	\$	300	\$ 390,516	\$	5,091	\$	411,065	\$	1,387,363	\$	(188,925)	\$ (5	,753)	\$	148,440	\$	2,148,397
Net income		_		_	_		_		_		97,865		_		_		_		97,865
Other comprehensive loss															(652)				(652)
BALANCE - September 30, 2018	\$	300	\$	300	\$ 390,516	\$	5,091	\$	411,065	\$	1,485,228	\$	(188,925)	\$ (6	,405)	\$	148,440	\$	2,245,610

CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

	For t	he nine months	ended	•
(In thousands)		2019		2018
CASH FLOWS FROM OPERATING ACTIVITIES:				
Net income	\$	191,811	\$	233,669
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:				
Depreciation and amortization		105,434		121,785
Loss on impairment of Intangible assets		2,968		_
Net (gain)/loss on disposal of Premises and equipment and Intangible assets		2,716		(1,828)
(Earnings)/losses from Equity method investments		(150)		4,543
Deferred income taxes		2,197		17,194
Discount on Commercial paper outstanding		21,983		_
Other		(238)		6,918
Net change in:				
Accounts receivable		6,644		4,053
Other Participants' assets		450		2,044
Other assets		2,543		(20,315)
Accounts payable and accrued expenses		16,313		(10,407)
Pension and postretirement benefits		(18,854)		(51,617)
Other liabilities		(21,410)		(76,431)
Participants' and Clearing Funds liabilities, net		1,967,962		(60,444)
Payable to Participants		863,731		516,123
Net cash provided by operating activities		3,144,100		685,287
CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchases of Short-term investments		(1,500,000)		_
Maturities of Short-term investments		1,400,000		_
Maturities of Investments in marketable securities				83,600
Purchases of Investments in marketable securities		_		(58,600)
Purchases of Premises and equipment		(34,883)		(20,353)
Capitalized software development costs		(82,408)		(71,500)
Investment in Equity method investments				(5,000)
Purchase of equity investments		(500)		(1,104)
Net cash used in investing activities		(217,791)		(72,957)
CASH FLOWS FROM FINANCING ACTIVITIES:		<u>`</u>		<u>` ` · · · · ·</u>
Change in Commercial paper, net (see Note 11)		(90,306)		3,185,170
Repayments on long-term debt and other borrowings		(7,037)		(3,512)
Preferred stock dividend payments		(9,750)		(9,750)
Payment to Non-controlling interests		(2,340)		(1,080)
Net cash provided by/(used in) financing activities		(109,433)		3,170,828
Effect of foreign exchange rate changes on Cash and cash equivalents		(1,100)		(1,967)
Net increase/(decrease) in Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets		2,815,776		3,781,191
Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets - Beginning of period		25,569,357		20,268,842
Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets - End of period	\$	28,385,133	\$	24,050,033
SUPPLEMENTAL DISCLOSURES:				
Non-cash investing and financing activity related to information technology	\$	14,428	\$	
Interest paid	\$	108,611	\$	51,953
Income taxes paid - net of refunds	\$	57,109	\$	65,848
Non-cash financing activity - capital lease obligation	\$		\$	3,640

The Notes to Consolidated Financial Statements are an integral part of these statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

1. BUSINESS AND OWNERSHIP

The Depository Trust & Clearing Corporation (DTCC) is the parent company of various operating subsidiaries, including, but not limited to, The Depository Trust Company (DTC), National Securities Clearing Corporation (NSCC), Fixed Income Clearing Corporation (FICC), DTCC ITP LLC (ITP), DTCC Deriv/SERV LLC (Deriv/SERV), DTCC Solutions LLC (Solutions), Business Entity Data, B.V. (GMEI); collectively, the "Company" or "Companies."

Subsidiaries

DTC is a limited purpose trust company formed under the Banking Law of New York State and supervised by the New York State Department of Financial Services (NYSDFS); a State member bank of the Federal Reserve System (FRS), subject to examination by the Federal Reserve Bank of New York (FRBNY) under delegated authority from the Board of Governors (the FRB) of the FRS; and a clearing agency registered with and under the supervision of the U.S. Securities and Exchange Commission (SEC). DTC provides central securities depository, settlement and related services to members of the securities, banking and financial services industries.

NSCC is organized as a business corporation under New York law, and is a clearing agency registered with the SEC. NSCC provides clearing, settlement, risk management, and central counterparty (CCP) services to its members for broker-to broker trades involving equities, corporate and municipal debt, exchange-traded funds, and unit investment trusts.

FICC is a clearing agency registered with the SEC that provides CCP services to members that participate in the U.S. government and mortgage-backed securities markets, consisting principally of automated real-time trade comparison, netting, clearance, settlement, trade confirmation, risk management and electronic pool notification. FICC has two divisions: the Government Securities Division (GSD) and the Mortgage-Backed Securities Division (MBSD).

DTC, NSCC and FICC are designated as Systemically Important Financial Market Utilities (SIFMUs) by the U.S. Financial Stability Oversight Council pursuant to Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. This designation subjects the clearing agencies to enhanced standards for operation and governance, as established by the SEC's Standards for Covered Clearing Agencies (CCAS).

The members of DTCC's clearing agencies are collectively referred to as Participants.

ITP, formerly known as Omgeo LLC, provides post-trade matching, processing and other related services, primarily to members of the financial community.

Deriv/SERV, through its subsidiaries and affiliates, enhances transparency and provides operational efficiency, advanced analytics and strategic consulting for derivatives and securities financing transactions. A system of trade repositories supports a multitude of data submissions covering real-time price reporting, transaction details and valuation data. Deriv/SERV offers the Trade Information Warehouse asset servicing for credit default swaps and Equity Cash Flow Matching for equity derivatives.

Solutions provides information-based and business processing solutions to financial intermediaries globally.

GMEI utility is DTCC's Legal Entity Identifier (LEI) solution offered in collaboration with Society for Worldwide Interbank Financial Telecommunication (SWIFT) and a consortium of 14 global financial services organizations, led by the Global Financial Markets Association (GFMA), to meet the requirements across all asset classes. GMEI is designed to create and apply a single, universal standard identifier to any organization or firm involved in a financial transaction globally.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

2. BASIS OF PRESENTATION AND USE OF ESTIMATES

Basis of presentation. The accompanying unaudited Consolidated Financial Statements (interim financial statements) are prepared in accordance with generally accepted accounting principles in the United States of America (U.S. GAAP). The accompanying interim financial statements exclude some of the disclosures required in audited financial statements and should be read in conjunction with DTCC's Audited Consolidated Financial Statements for the years ended December 31, 2018 and 2017, which are located on the Company's website at http://www.dtcc.com/legal/financial-statements. See Note 2 in DTCC's Audited Consolidated Financial Statements for the years ended December 31, 2018 and 2017, for additional information on the Company's Summary of Significant Accounting Policies.

The Consolidated Financial Statements reflect all adjustments of a normal recurring nature that are, in the opinion of management, necessary for the fair presentation of the results for the interim period. The results of operations for interim periods are not necessarily indicative of results for the entire year. The Consolidated Financial Statements include the accounts of the Company and its wholly-owned subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation.

Use of estimates. The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the Consolidated Financial Statements. Management makes estimates regarding, among other things, the collectability of receivables, the outcome of litigation, the realization of deferred taxes, unrecognized tax benefits, impairment of intangible assets, fair value measurements and other matters that affect the reported amounts. Estimates are based on judgment and available information; therefore, actual results could differ materially from those estimates.

Commitments and contingencies. The Company is involved in legal proceedings and litigation arising in the ordinary course of business. In the opinion of management, the outcome of such proceedings and litigation is not expected to have a material effect on the accompanying Consolidated Statements of Financial Condition, Income or Cash Flows.

Revenue recognition. The Company derives its revenue from transaction fees, subscription revenue and support services, professional services, and other services. Revenue from transaction fees is recognized at a point in time on the transaction date, as the customer obtains the control and benefit of the service at that point. Subscription and support revenues are recognized ratably over the performance period of the relevant contract using a time elapsed measure of progress as the customer receives the benefits of the services throughout the term of the contract. Professional services and other revenues, when sold with subscription and support offerings, are accounted for separately when these services have value to the customer on a standalone basis and are recognized as the performance obligation is satisfied and control of the service is transferred to the customer, otherwise they are recognized ratably over the contract term. Other services, which represent fees generated from offering referential based data and business processing solutions to financial institutions globally, is recognized when services are provided based on contractual terms.

Details for each revenue stream presented in the Company's Consolidated Statements of Income follow:

Settlement and asset services. DTC provides settlement services for equity, corporate and municipal debt trades and money market instruments in the U.S. The payment and transfer of securities ownership occurs at DTC, which provides custody and asset servicing for securities. Asset services include underwriting, corporate actions processing, securities processing, global tax services and issuer services.

Clearing services. The Company's subsidiaries, NSCC and FICC, deliver clearing services across the U.S. equities and fixed income markets. Clearing services include continuous net settlement, mortgage backed securities clearing, and government securities clearing.

Matching and data services. DTCC's Institutional Trade Processing (ITP) service provides trade processing solutions combined with DTCC's global solution for LEIs and its settlement capabilities with pre-trade and matching services. ITP offers buy-side, sell-side, and custodian firms an end-to-end straight-through-processing solution for their trading activity. Matching and data services include trade enrichment, trade agreement, and data analytics.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

2. BASIS OF PRESENTATION AND USE OF ESTIMATES (CONTINUED)

Repository and derivatives services. Repository and Derivatives Services (RDS) provide solutions for derivatives trade reporting and contract servicing through the Global Trade Repository, Trade Information Warehouse and other services. The Global Trade Repository, operating through locally registered trade repositories, supports data submissions covering real-time price reporting, transaction details and valuation data to meet members' reporting obligations in various jurisdictions globally. The Trade Information Warehouse operates an asset servicing infrastructure for credit default swaps. In addition, RDS includes a matching service for equity derivatives payments and offers tools to member firms to address the quality of their derivatives trade submissions.

Wealth management services. NSCC provides wealth management services that include centralized, automated processing and information services for mutual fund, alternative investment, and insurance and retirement products. These businesses drive centralized, automated processing and information services. Wealth management services enable seamless, end-to-end communications with broker/dealers and other distribution partners for funds, asset managers and insurance companies and their service providers.

Other services. The Company offers referential and activity-based, announcement, security reference, and liquidity data through the DTCC Data Services product. These offerings are delivered in fixed or configurable formats, sourced from the Company's transaction, reference, position and asset servicing data.

Contract balances

Deferred revenue represents the Company's contract liabilities related to billings or payments received in advance for subscription and support services, as well as professional service fees, where the performance obligation has not yet been satisfied. Deferred revenue is included in Other current liabilities and Other non-current liabilities on the accompanying Consolidated Statements of Financial Condition, as disclosed in Note 10.

Impacts to previously reported results

The Company reclassified prior period amounts related to Trade Information Warehouse revenues to conform to the current year presentation. The impact of the change in presentation on the Company's previously reported results for the three and nine months ended September 30, 2018 follows (in thousands):

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		-	three months ei tember 30, 2018		a	_		tember 30, 2018		a
	As Previously Reported	R	eclassification Presentation Adjustment	A	s Restated	As Previously Reported	R	eclassification Presentation Adjustment	A	as Restated
Clearing services	\$ 141,707	\$	(1,422)	\$	140,285	\$ 448,617	\$	(5,490)	\$	443,127
Repository services	70,225		1,422		71,647	213,413		5,490		218,903

BASIS OF PRESENTATION AND USE OF ESTIMATES (CONTINUED)

Restricted cash. A reconciliation of Cash and cash equivalents, Participants' segregated cash, Clearing Fund cash deposits, Cash in Other Participants' assets, reported within the accompanying Consolidated Statements of Financial Condition that sum to the total of the same such amounts shown on the accompanying Consolidated Statements of Cash Flows follows (in thousands):

	 September 30, 2019	December 31, 2018	 September 30, 2018
Cash and cash equivalents	\$ 8,624,669	\$ 8,641,036	\$ 8,373,786
Participants' segregated cash	52,350	77,988	151,459
Participants' and Clearing Funds cash deposits	18,300,630	16,332,668	14,277,076
Cash in Other Participants' assets	1,407,484	517,665	1,247,712
Total Cash and cash equivalents, Participants' segregated cash, Participants' and Clearing Funds cash deposits, Cash in Other Participants' assets shown on the Consolidated Statements of Cash Flows	\$ 28,385,133	\$ 25,569,357	\$ 24,050,033

3. ACCOUNTING AND REPORTING DEVELOPMENTS

See Note 3 in DTCC's Audited Consolidated Financial Statements for the years ended December 31, 2018 and 2017, for additional information on the Company's Accounting and Reporting Developments.

Standard	Description	Impact on the financial statements or other significant matters
Financial Accounting State	ndards Board Standard Issued, but not yet Adop	ted
ASU 2019-05 Financial Instruments - Credit Losses: Targeted Transition Relief	• Provides entities with an option upon adoption of ASU 2016-13 <i>Customer's Financial Instruments</i> - <i>Credit Losses</i> to irrevocably elect the fair value option on an instrument-by-instrument basis for certain financial instruments that are both within the scope of the current expected credit loss and eligible for the fair value option.	 Effective January 1, 2020. The Company does not intend to elect the fair value option on any instrument within the scope and therefore no impact is expected.
Standard	Description	Impact on the financial statements or other significant matters
Recently Adopted Accoun	ting Standard	
ASU 2016-02 Leases Issued February 2016	 Requires a lessee to recognize leases with terms of longer than 12 months within balance sheet assets and liabilities. Changes the recognition, measurement and presentation of expenses and cash flows arising from a lease depending on its classification as a financing or operating lease as determined by the lessee. Lessor accounting will remain largely unchanged from current GAAP. Leases of fewer than 12 months are exempt from the updated standard. 	 Adopted January 1, 2019. The Company adopted the standard through a cumulative-effect adjustment without revising the prior comparative period and elected the practical expedients permitted under the transition guidance within the standard, which permits the Company not to reassess the following for any expired or existing contracts: i) whether any contracts contain leases; ii) lease classification (i.e. operating lease or finance lease); and iii) initial direct cost. See Note 8 for additional information.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

4. PARTICIPANTS' SEGREGATED CASH, OTHER PARTICIPANTS' ASSETS AND PAYABLE TO PARTICIPANTS

Details for Participants' segregated cash, Other Participants' assets and Payable to Participants as of September 30, 2019 and December 31, 2018 follow (in thousands):

	2019		2018
\$	52,350	\$	77,988
	1,407,484		517,665
	_		450
\$	1,459,834	\$	596,103
			
\$	1,459,834	\$	596,103
	<u>\$</u>	\$ 52,350 1,407,484 — \$ 1,459,834	\$ 52,350 \$ 1,407,484 \$ 1,459,834 \$

Participants' segregated cash represents cash received from Participants to facilitate their compliance with SEC customer protection rules. Unclaimed balances are remitted to the appropriate authority when required by abandoned property laws.

Payable to Participants included \$571,000 and \$127,000 of cash collateral received from Participants, representing 130% of short positions as of September 30, 2019 and December 31, 2018, respectively.

5. ACCOUNTS RECEIVABLE

Details for Accounts receivable as of September 30, 2019 and December 31, 2018 follow (in thousands):

	2019		2018
Due from Participants and customers for services	\$	159,792	\$ 165,554
Allowance for doubtful accounts		(260)	(1,650)
Due from Participants and customers for services, net		159,532	163,904
Other receivables		11,799	13,976
Total	\$	171,331	\$ 177,880

Total write-offs in the allowance for doubtful accounts were \$235,000 and \$94,000 for the three months ended September 30, 2019 and 2018, respectively, and \$1,295,000 and \$299,000 for the nine months ended September 30, 2019 and 2018, respectively.

PARTICIPANTS' AND CLEARING FUNDS

Details for the Participants' and Clearing Funds as of September 30, 2019 and December 31, 2018 follow (in thousands):

		2019						
		DTC NSCC			FICC			Total
Required deposits	\$	1,155,000	\$	6,916,913	\$	19,716,406	\$	27,788,319
Excess deposits		815,499		677,677		7,962,464		9,455,640
Total	\$	1,970,499	\$	7,594,590	\$	27,678,870	\$	37,243,959
				20	18			
		DTC		NSCC 20	18	FICC		Total
Required deposits	\$	DTC 1,150,000	\$		\$	FICC 18,053,674	\$	Total 26,034,118
Required deposits Excess deposits	\$		\$	NSCC	_		\$	
-	\$ \$	1,150,000	\$	NSCC 6,830,444	_	18,053,674	\$	26,034,118

Cash deposits and Securities on deposit. Details for cash deposits and securities on deposit of the Participants' and Clearing Funds, which may be applied to satisfy obligations of the depositing Participant, other Participants, or the Company as provided in the rules of the relevant subsidiaries of the Company, as of September 30, 2019 and December 31, 2018 follow (in thousands):

	2019							
		DTC		NSCC		FICC		Total
Cash deposits	\$	1,970,499	\$	7,028,635	\$	9,301,496	\$	18,300,630
Securities on deposit - at fair value				565,955		18,377,374	\$	18,943,329
Total	\$	1,970,499	\$	7,594,590	\$	27,678,870	\$	37,243,959
	2018							
		DTC		NSCC		FICC		Total
Cash deposits	\$	1,834,363	\$	7,651,033	\$	6,847,272	\$	16,332,668
Securities on deposit - at fair value		_		614,502		19,674,952		20,289,454
Total	\$	1,834,363	\$	8,265,535	\$	26,522,224	\$	36,622,122

Details for the Participants' and Clearing Funds cash deposits as of September 30, 2019 and December 31, 2018 follow (in thousands):

	2019						
	DTC		NSCC		FICC		Total
Bank deposits	\$ 1,970,499	\$	5,280,635	\$	7,200,496	\$	14,451,630
Money market fund investments			1,223,000		1,601,000		2,824,000
Reverse repurchase agreements			525,000		500,000		1,025,000
Total	\$ 1,970,499	\$	7,028,635	\$	9,301,496	\$	18,300,630
			20	18			
	DTC		NSCC		FICC		Total
Bank deposits	\$ 1,834,363	\$	5,720,033	\$	5,466,272	\$	13,020,668
Money market fund investments			1,556,000		931,000		2,487,000
Reverse repurchase agreements	 		375,000		450,000		825,000
Total	\$ 1,834,363	\$	7,651,033	\$	6,847,272	\$	16,332,668

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

7. EQUITY METHOD INVESTMENTS

Details for DTCC's Equity method investments as of September 30, 2019 and December 31, 2018 follow (in thousands, except ownership percentage):

	2019	2018
European Central Counterparty N.V.		
Percentage ownership	20%	20%
Carrying value	\$ 10,130	\$ 10,491
DTCC-Euroclear GlobalCollateral, LTD		
Percentage ownership	50%	50%
Carrying value	\$ 	\$

European Central Counterparty N.V. (ECCP N.V.), a joint venture with ABN AMRO Clearing Investments B.V., NASDAQ AB, BATS Trading Limited and Euronext N.V., provides a pan-European clearing solution offering economies of scale and risk management expertise to European market participants. ECCP N.V. uses the risk management framework and customer service organization of European Multilateral Clearing Facility N.V. (EMCF), and conducts its operations using the technology platform and infrastructure of EMCF.

DTCC-Euroclear GlobalCollateral LTD (DEGCL), a joint venture with Euroclear plc, provides support to financial institutions in addressing significant regulatory, operational and industry challenges related to the management of margin calls and collateral impacting the over-the-counter (OTC) derivatives market.

Cash contributions made to DEGCL subsequent to December 2017 were for the funding of prior losses of DEGCL and are included in Net loss from Equity method investments in the accompanying Consolidated Statements of Income until financial conditions improve. DTCC continues to maintain its relationship with the DEGCL joint venture.

There were no contributions to DEGCL during 2019. The Company's contributions to DEGCL for the year ended December 31, 2018 follow (in thousands):

	A	mount
June 19, 2018	\$	5,000
December 5, 2018		6,000
Total (1)	\$	11,000

(1) DTCC maintained the same ownership percentage as the joint venture partner, Euroclear plc, who also contributed a total of \$11,000,000

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

8. LEASES

The Company leases corporate offices, data centers and certain equipment primarily through operating leases. The Company's leases have remaining lease terms of 1 to 14 years, some of which may include options to extend the lease up to 10 years, and some of which may include options to terminate the lease within 1 year.

On January 1, 2019, the Company adopted ASU 2016-02, *Leases* under the modified retrospective method. See Note 3 for additional information. The Company determines if an arrangement is or contains a lease at contract inception and accounts for lease components separately from non-lease components of an arrangement. Operating leases are included in Operating lease right-of-use (ROU) asset, Current portion of operating lease liability, and Non-current operating lease liability on the Company's Consolidated Statements of Financial Condition.

ROU assets represent the Company's right to use an underlying asset for the lease term and lease liabilities represent the Company's obligation to make lease payments arising from the lease. The ROU assets are measured at the amount equal to the lease liabilities, adjusted for balances of accrued or prepaid rent and unamortized lease incentives provided by lessors. Operating lease liabilities are recognized based on the present value of the future lease payments over the remaining lease term. The Company uses its incremental borrowing rate, factoring in the lease term, to determine the lease liability. When determining lease term, the Company considers renewal options that the Company is reasonably certain to exercise and termination options that the Company is reasonably certain not to exercise. For operating leases, expense is generally recognized on a straight-line basis over the lease term.

Details for leased assets and lease liabilities as of September 30, 2019 follow (in thousands):

Assets	
Operating lease right-of-use	\$ 243,215
Total leased assets	\$ 243,215
Liabilities	
Current	
Current portion of operating lease liabilities	\$ 24,957
Non-current	
Non-current operating lease liabilities	271,156
Total leased liabilities	\$ 296,113
Details for the maturity of lease liabilities follow (in thousands):	
2019	\$ 8,986
2020	34,922
2021	33,299
2022	27,468
2023	27,433
Thereafter	230,179
Total lease payments	362,287
Interest	(66,174)
Present value of lease liabilities	\$ 296,113

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

8. LEASES (CONTINUED)

Details for estimated future minimum rental payments under all noncancelable leases as of December 31, 2018 follow (in thousands):

2019	\$ 33,981
2020	33,804
2021	33,879
2022	29,779
2023	29,716
Thereafter	232,344
Total minimum rental payments (1)	\$ 393,503

(1) Future minimum rental payments were not reduced by minimum sublease rentals of \$53 million due in the future under noncancelable subleases.

In addition to the table above, as of September 30, 2019, the Company had \$2.4 million of minimum lease payments on operating leases that were signed but had not yet commenced. These operating leases will commence in the first quarter of 2020 with lease terms up to 5 years.

Details for the lease expense and the lease payments for the three months ended September 30, 2019 follow (in thousands):

Lease expense		
Occupancy	\$	5,587
Information technology		2,630
Total lease expense		8,217
Sublease income		(1,440)
Net lease expense	\$	6,777
Lease payments included in the measurement of lease liabilities	•	0.000
Operating cash flows (1)	\$	8,830
Total lease cash flows	\$	8,830

(1) Included with net change in Other liabilities in the Consolidated Statements of Cash Flows

Details for the lease expense and the lease payments for the nine months ended September 30, 2019 follow (in thousands):

Lease expense	
Occupancy	\$ 21,264
Information technology	 5,323
Total lease expense	 26,587
Sublease income	 (4,344)
Net lease expense	\$ 22,243
Lease payments included in the measurement of lease liabilities	
Operating cash flows ⁽¹⁾	\$ 25,978
Total lease cash flows	\$ 25,978

(1) Included with net change in Other liabilities in the Consolidated Statements of Cash Flows

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED) AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

8. LEASES (CONTINUED)

Details of the weighted average remaining lease term and weighted average discount rate used to determine the lease liability as of September 30, 2019 follow:

Weighted average remaining lease term (years)	11.3
Weighted average discount rate	3.34%
Leased assets obtained in exchange for operating lease obligations (in thousands)	
three months ended September 30, 2019	\$ 12,876
nine months ended September 30, 2019	\$ 12,876

9. OTHER ASSETS

Details for Other assets as of September 30, 2019 and December 31, 2018 follow (in thousands):

	2019		2018		
Prepaids	\$	99,372	\$ 81,774		
Prepaid taxes		18,593	24,645		
Interest receivable		16,545	27,353		
Other current assets		41	188		
Total other current assets		134,551	133,960		
Long-term incentive plan assets		155,791	148,549		
Cash surrender value on insurance policies		63,852	61,035		
Deferred tax assets		42,500	44,952		
Prepaids		30,913	44,978		
Equity investments		12,393	11,750		
Investment in Federal Reserve Stock		6,402	6,402		
Other non-current assets		2,885	1,913		
Total other non-current assets		314,736	319,579		
Total	\$	449,287	\$ 453,539		

See Note 11 in DTCC's Audited Consolidated Financial Statements for the years ended December 31, 2018 and 2017 for additional information.

10. OTHER LIABILITIES

Details for Other liabilities as of September 30, 2019 and December 31, 2018 follow (in thousands):

	2019	2018
Compensation payable	\$ 109,508	\$ 143,837
Long-term incentive plan liabilities	27,628	51,979
Deferred revenue	11,471	12,311
Deferred rent	_	829
Other current liabilities	57,212	51,721
Total other current liabilities	205,819	260,677
Long-term incentive plan liabilities	234,655	206,758
Unrecognized tax benefits (1)	42,114	40,153
Deferred revenue	1,306	1,431
Deferred tax liabilities	715	970
Deferred rent	_	35,136
Other payables	1,997	3,886
Total other non-current liabilities	280,787	288,334
Total	\$ 486,606	\$ 549,011

⁽¹⁾ See Note 15 for additional information.

11. COMMERCIAL PAPER

Details for Commercial paper as of September 30, 2019 and December 31, 2018 follow (in thousands):

	2019	2018
Commercial paper - net of unamortized discount of \$25,049 and \$43,856	\$ 7,367,818	\$ 7,436,141
as of September 30, 2019 and December 31, 2018, respectively		
Weighted-average interest rate	2.32%	2.59%

Interest expense on Commercial paper included in the accompanying Consolidated Statements of Income was \$39,911,000 and \$31,424,000 for the three months ended September 30, 2019 and 2018, respectively, and \$129,571,000 and \$65,453,000 for the nine months ended September 30, 2019 and 2018, respectively.

Details for the cash flows associated with the issuance and maturities of Commercial paper for the nine months ended September 30, 2019 and 2018 follow (in thousands):

	2019			2018
Maturities less than 90 days: Proceeds from/(Repayments of) Commercial paper less than 90 days, net	\$	82,783	\$	340,932
Maturities greater than 90 days:				
Proceeds from Commercial paper		4,992,766		5,066,469
Repayments of Commercial paper		(5,165,855)		(2,222,231)
Proceeds from/(Repayments of) Commercial paper greater than 90 days, net		(173,089)		2,844,238
Change in Commercial paper, net	\$	(90,306)	\$	3,185,170

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

12. LONG-TERM DEBT

Details for Long-term debt as of September 30, 2019 and December 31, 2018 follow (in thousands):

	2	2019	2018
Notes payable	\$	34,450	\$ 36,375
Information technology financing		9,316	_
Total long-term debt		43,766	36,375
Less: Current portion of long-term debt		(7,123)	(2,650)
Non-current portion of long-term debt	\$	36,643	\$ 33,725

Details for principal payments due on Long-term debt for each of the next five years and thereafter follow (in thousands):

	Notes Payable	Tec	ormation hnology nancing	Total
2019	\$ 725	\$	1,292	\$ 2,017
2020	2,650		4,103	\$ 6,753
2021	2,650		3,921	\$ 6,571
2022	2,650		_	\$ 2,650
2023	2,650		_	\$ 2,650
Thereafter	23,125		_	\$ 23,125
Total	\$ 34,450	\$	9,316	\$ 43,766

Notes payable. Details for notes payable as of September 30, 2019 and December 31, 2018 follow (in thousands):

			Outstandi	ng Ba	alance
Issue Date	Maturity	Rate	2019		2018
April 26, 2012	April 26, 2032	3.83%	\$ 18,850	\$	19,575
September 28, 2012	September 28, 2032	3.93%	15,600		16,800
Total			\$ 34,450	\$	36,375

The weighted-average interest rate was 3.88% as of September 30, 2019 and December 31, 2018, respectively. Total Interest expense on notes payable included in the accompanying Consolidated Statements of Income was \$339,000 and \$365,000 for the three months ended September 30, 2019 and 2018, respectively, and \$1,033,000 and \$1,110,000 for the nine months ended September 30, 2019 and 2018, respectively.

Information Technology Financing. On January 1, 2019, the Company obtained three year financing of \$14 million from IBM Credit LLC in connection to its software and services purchase agreement with IBM. The weighted-average interest rate of the loan was 3.90% as of September 30, 2019. Interest expense on the loan included in the accompanying Consolidated Statements of Income was \$95,000 and \$325,000 for the three and nine months ended September 30, 2019, respectively.

12. LONG-TERM DEBT (CONTINUED)

Lines of credit. DTCC maintains a committed line of credit for general funding purposes while certain of its subsidiaries, DTC and NSCC, also maintain committed lines of credit to support settlement.

Details for the terms of the outstanding lines of credit as of September 30, 2019 and December 31, 2018 follow:

	2019	2018
DTCC		
Committed Amount	\$500 million	\$500 million
Denomination	USD	USD
Number of Participants/Lenders	10/10	10/10
DTC		
Committed Amount	\$1.9 billion	\$1.9 billion
Denomination	USD	USD
Number of Participants/Lenders	32/41	33/41
Uncommitted Amount	C\$150 million (1)	C\$150 million (1)
Denomination	CAD	CAD
Number of Participants/Lenders	1/1	1/1
NSCC		
Committed Amount	\$12.1 billion	\$12.1 billion
Denomination	USD	USD
Number of Participants/Lenders	32/41	33/41

⁽¹⁾ Used to support Canadian settlement.

There were no borrowings under the lines of credit during 2019 and 2018.

Details for debt covenants related to the notes payable and lines of credit as of September 30, 2019 and December 31, 2018 follow:

	2019	2018
Notes Payable		
<u>DTCC</u>		
Minimum Net Worth	\$400 million	\$400 million
Maximum Priority Debt	20% of Net Worth	20% of Net Worth
Lines of Credit		
<u>DTCC</u>		
Minimum Net Worth	\$1.25 billion	\$1.1 billion
Maximum Priority Debt	\$200 million	\$200 million
<u>DTC</u>		
Minimum Net Worth	\$150 million	\$150 million
Minimum Participants' Fund deposits	\$750 million	\$750 million
<u>NSCC</u>		
Minimum Net Worth	\$125 million	\$125 million
Minimum Clearing Fund deposits	\$1 billion	\$1 billion

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

12. LONG-TERM DEBT (CONTINUED)

As of September 30, 2019 and December 31, 2018, the Company was in compliance with its debt covenants.

Credit Ratings. DTCC, DTC, FICC and NSCC are rated by Moody's Investors Service, Inc. (Moody's) and S&P Global Inc. (S&P). Details for issuer credit ratings and ratings outlooks for DTCC and its three clearing agency subsidiaries as of September 30, 2019 follow:

	Moody's (1)			S&P						
	Long-term	Short-term	Outlook	Long-term	Short-term	Outlook				
DTCC	Aa3	N/A	Stable	AA-	A-1+	Stable				
DTC	Aaa	P-1	Stable	AA+	A-1+	Stable				
FICC	Aaa	P-1	Stable	AA	A-1+	Stable				
NSCC	Aaa	P-1	Stable	AA+	A-1+	Stable				

(1) Moody's categorizes the long-term issuer ratings of DTC, FICC and NSCC as clearing counterparty ratings (CCR) under the agency's Clearing Houses Rating Methodology.

13. FAIR VALUE MEASUREMENTS

See Note 15 in DTCC's Audited Consolidated Financial Statements for the years ended December 31, 2018 and 2017, for the Company's valuation basis, including valuation techniques and inputs, as well as the fair value hierarchy used in measuring the Company's financial assets and liabilities that are both accounted for at fair value and at other than fair value.

Financial Assets and Liabilities measured at fair value on a recurring basis.

Fair value measurements of those items measured on a recurring basis as of September 30, 2019 are summarized below (in thousands):

	2019								
	Level 1		Level 2		Level 3			Total	
Assets - Participants' and Clearing Funds									
Securities on deposit	\$	14,960,357	\$	3,982,972	\$		\$	18,943,329	
Non-current assets									
Long-term incentive plan assets		98,217		35,474				133,691	
Total assets, excluding investments at fair value based on NAV	\$	15,058,574	\$	4,018,446	\$		\$	19,077,020	
Participants' and Clearing Funds - Securities									
liabilities	\$	14,960,357	\$	3,982,972	\$		\$	18,943,329	
Total	\$	14,960,357	\$	3,982,972	\$		\$	18,943,329	

The Company uses Net Asset Value (NAV) to estimate the fair value of certain investments held by the Long Term Incentive Plan (the Plan). Investments in Common Collective Trust funds are valued at NAV based upon the redemption price of units held by the Plan, which is based on the current fair value of the Common Collective Trust funds' underlying assets. Unit values are determined by the financial institution sponsoring such funds by dividing the funds' net assets at fair value by its units outstanding at the valuation dates.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

13. FAIR VALUE MEASUREMENTS (CONTINUED)

Details of investments measured at fair value using NAV as of September 30, 2019 follow (in thousands):

	2019								
	NAV	Redemption Frequency	Other Redemption Restrictions	Redemption Notice Period					
Common Collective Trusts	\$ 22,100	Daily	None	None					

There was no unfunded commitment to these investments as of September 30, 2019.

Fair value measurements of those items measured on a recurring basis as of December 31, 2018 are summarized below (in thousands):

	2018								
		Level 1	Level 2		Level 3			Total	
Assets - Participants' and Clearing Funds									
Securities on deposit	\$	16,659,680	\$	3,629,774	\$		\$	20,289,454	
Non-current assets									
Long-term incentive plan assets		113,151		35,398				148,549	
Total	\$	16,772,831	\$	3,665,172	\$	_	\$	20,438,003	
Participants' and Clearing Funds - Securities									
liabilities	\$	16,659,680	\$	3,629,774	\$		\$	20,289,454	
Total	\$	16,659,680	\$	3,629,774	\$		\$	20,289,454	

Certain investments may transfer between the fair value hierarchy classifications during the year due to changes in valuation methodology and pricing sources. There were no financial assets and liabilities measured at fair value on a recurring basis classified as Level 3 for the periods ended September 30, 2019 and December 31, 2018.

Financial Assets and Liabilities measured at other than fair value. The carrying values, fair values and fair value hierarchy levels of all financial instruments measured at other than fair value on the accompanying Consolidated Statements of Financial Condition as of September 30, 2019 and December 31, 2018 follow (in thousands):

		2019		
Carrying Amount	Total Fair Value	Level 1	Level 2	Level 3
\$ 8,624,669	\$ 8,624,669	\$ 8,624,669	\$ —	\$ —
52,350	52,350	52,350		
900,000	900,000		900,000	
18,300,630	18,300,630	17,275,630	1,025,000	_
1,407,484	1,407,484	1,407,484		
\$29,285,133	\$29,285,133	\$27,360,133	\$ 1,925,000	\$ —
		\$ —		\$ —
105,828	105,828		105,828	
18,300,630	18,300,630	18,300,630	_	_
1,459,834	1,459,834	1,459,834		
43,766	47,609		47,609	
\$27,277,876	\$27,281,719	\$19,760,464	\$ 7,521,255	\$ —
	\$ 8,624,669 52,350 900,000 18,300,630 1,407,484 \$29,285,133 \$ 7,367,818 105,828 18,300,630 1,459,834 43,766	Amount Value \$ 8,624,669 \$ 8,624,669 52,350 52,350 900,000 900,000 18,300,630 18,300,630 1,407,484 1,407,484 \$29,285,133 \$29,285,133 \$ 7,367,818 105,828 18,300,630 18,300,630 1,459,834 1,459,834 43,766 47,609	Carrying Amount Total Fair Value Level 1 \$ 8,624,669 \$ 8,624,669 \$ 8,624,669 \$ 52,350 \$ 52,350 \$ 52,350 \$ 900,000 \$ 900,000 — \$ 18,300,630 \$ 18,300,630 \$ 17,275,630 \$ 1,407,484 \$ 1,407,484 \$ 1,407,484 \$ 29,285,133 \$ 27,360,133 \$ 7,367,818 \$ 7,367,818 \$ — \$ 105,828 \$ 105,828 — \$ 18,300,630 \$ 18,300,630 \$ 18,300,630 \$ 1,459,834 \$ 1,459,834 \$ 1,459,834 \$ 43,766 \$ 47,609 —	Carrying Amount Total Fair Value Level 1 Level 2 \$ 8,624,669 \$ 8,624,669 \$ 8,624,669 \$ \$ 2,350 \$ 2,350 \$ 2,350 \$ 900,000 \$ 900,000 \$ 900,000 \$ 18,300,630 \$ 18,300,630 \$ 17,275,630 \$ 1,025,000 \$ 1,407,484 \$ 1,407,484 \$ 1,407,484 \$ 29,285,133 \$ 29,285,133 \$ 27,360,133 \$ 1,925,000 \$ 7,367,818 \$ 7,367,818 \$ \$ 7,367,818 \$ 105,828 \$ 105,828 \$ 105,828 \$ 18,300,630 \$ 18,300,630 \$ 18,300,630 \$ 1,459,834 \$ 1,459,834 1,459,834 \$ 43,766 \$ 47,609 \$ 47,609

13. FAIR VALUE MEASUREMENTS (CONTINUED)

			2018		
	Carrying Amount	Total Fair Value	Level 1	Level 2	Level 3
Assets:					
Cash and cash equivalents	\$ 8,641,036	\$ 8,641,036	\$ 8,641,036	\$ —	\$ —
Participants' segregated cash	77,988	77,988	77,988	_	
Short-term investments	800,000	800,000		800,000	_
Participants' and Clearing Funds Cash deposits	16,332,668	16,332,668	15,507,668	825,000	_
Other Participants' assets	518,115	518,115	517,665	450	
Total	\$26,369,807	\$26,369,807	\$24,744,357	\$ 1,625,450	<u> </u>
Liabilities:					
Commercial paper	\$ 7,436,141	\$ 7,436,141	\$ —	\$ 7,436,141	\$ —
Accounts payable and accrued expenses	104,013	104,013		104,013	
Participants' and Clearing Funds Cash deposit liabilities	16,332,668	16,332,668	16,332,668	_	_
Payable to Participants	596,103	596,103	596,103		_
Long-term debt	36,375	36,035	_	36,035	
Total	\$24,505,300	\$24,504,960	\$16,928,771	\$ 7,576,189	<u>\$</u>

Financial Assets measured at fair value on a non-recurring basis. Certain assets are subject to measurement at fair value on a non-recurring basis. For these assets, measurement at fair value in periods subsequent to their initial recognition is applicable if they are determined to be impaired or when an observable event occurs.

Financial assets measured at fair value on a non-recurring basis primarily comprise of equity investments, which are classified as Level 3 instruments. The valuation techniques used to measure the fair value of the financial asset and the significant unobservable inputs as of September 30, 2019 follow:

Financial Instruments	Fair Value	Valuation	Unobservable	Input	Weighted
Owned	(in thousands)	Technique	Inputs	Range	Average
Equity investments	\$12,393	Last Round of Financing	Price Per Share ⁽¹⁾	\$18 - \$107 ⁽²⁾	\$64 ⁽²⁾

- (1) Price is determined using the latest valuation from the most recent round of financing of equity investments.
- (2) The unobservable input range and weighted-average prices are driven by the individual equity investments.

On August 29, 2019, the Company made an additional cash investment of \$500,000 in Equity Investments, which increased the Company's total investment in Equity investments to \$12,393,000, including a \$143,000 mark-to market investment gain included in Other non-operating income in the accompanying Consolidated Statements of Income. The fair value of the investments were determined based on the latest valuation of Equity investments from their most recent round of financing, using Level 3 inputs.

There were no sales, unrealized gains, or unrealized losses of the Company's equity investments categorized within Level 3 in the fair value hierarchy for the nine months ended September 30, 2019.

14. PENSION AND POSTRETIREMENT BENEFITS

Defined contribution retirement plans. Total expense for the defined contribution retirement plans included in Employee compensation and related benefits in the accompanying Consolidated Statements of Income was \$11,741,000 and \$10,468,000 for the three months ended September 30, 2019 and 2018, respectively, and \$32,740,000 and \$26,399,000 for the nine months ended September 30, 2019 and 2018, respectively.

Defined benefit pension and other postretirement benefit plans. Details of the components of net periodic benefit expense (income) and amortization for the Company's pension and postretirement benefit plans, included in Employee compensation and related benefits, Interest expense, and Other non-operating income in the accompanying Consolidated Statements of Income, for the three months ended September 30, 2019 and 2018 follow (in thousands):

	Pension Benefits		Other B		Benefits		
		2019	2018		2019		2018
Components of net periodic benefit expense (income):							
Expected return on plan assets	\$	(8,296)	\$ (9,896)	\$	_	\$	
Interest cost		10,107	9,384		611		558
Service cost		499	1,641		167		223
Amortizations:							
Prior service cost (credit)		234	234		(1,482)		(1,482)
Actuarial loss		1,396	2,244		318		620
Settlement loss		815	56		_		
Net periodic benefit expense (income)	\$	4,755	\$ 3,663	\$	(386)	\$	(81)
	_						

Details of the components of net periodic benefit expense (income) and amortization for the Company's pension and postretirement benefit plans for the nine months ended September 30, 2019 and 2018 follow (in thousands):

	Pension Benefits			Other Benefits				
		2019		2018		2019		2018
Components of net periodic benefit expense (income):								
Expected return on plan assets	\$	(28,500)	\$	(29,688)	\$		\$	
Interest cost		30,153		28,152		1,833		1,674
Service cost		2,601		4,923		501		669
Amortizations:								
Prior service cost (credit)		702		702		(4,446)		(4,446)
Actuarial loss		4,032		6,732		954		1,860
Settlement loss		861		168				
Net periodic benefit expense (income)	\$	9,849	\$	10,989	\$	(1,158)	\$	(243)

The Company contributed \$20 million to the Pension Plan for the nine months ended September 30, 2019. An additional contribution of \$20.25 million was made in November 2019. The Company does not expect to make any additional contributions for the remainder of the fiscal year. The Company contributed \$55 million to the Pension Plan for the nine months ended September 30, 2018.

See Note 16 in DTCC's Audited Consolidated Financial Statements for the years ended December 31, 2018 and 2017 for additional information.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

15. INCOME TAXES

Details for unrecognized tax benefits, included in Other non-current liabilities on the accompanying Consolidated Statements of Financial Condition, as of September 30, 2019 and 2018 follow (in thousands):

2019		
28,692	\$	53,008
(771)		(21,481)
		400
(42)		(5,420)
		(649)
27,879		25,858
14,235		11,053
42,114	\$	36,911
	28,692 (771) — (42) — 27,879 14,235	28,692 \$ (771) — (42) — 27,879 14,235

See Note 17 in DTCC's Audited Consolidated Financial Statements for the years ended December 31, 2018 and 2017 for additional information.

16. SHAREHOLDERS' EQUITY

DTCC Series A Preferred stock. All 10,000 shares of DTCC Series A Preferred stock are issued and outstanding and held of record by Stock Clearing Corporation, a wholly owned subsidiary of the New York Stock Exchange LLC, the successor-in-interest to the New York Stock Exchange Inc. In the event of DTCC's voluntary or involuntary liquidation, dissolution or winding-up, the holders of Series A Non-Cumulative Perpetual Preferred stock are entitled to a liquidation preference of \$30.00 per share.

DTCC Series B Preferred stock. All 10,000 shares of DTCC Series B Preferred stock are issued and outstanding and held of record by National Clearing Corporation, a wholly owned subsidiary of the Financial Industry Regulatory Authority Inc. ("FINRA"). In the event of DTCC's voluntary or involuntary liquidation, dissolution or winding-up, the holders of Series B Preferred stock are entitled to a liquidation preference of \$30.00 per share.

DTCC Series C Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred stock. DTCC issued 1,600 shares of Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred stock, Series C, \$0.50 par value per share, with a liquidation preference of \$250,000 per share. When declared by DTCC's Board of Directors, dividends on the Series C Preferred stock are payable in arrears on June 15 and December 15 of each year through June 15, 2020 at a fixed rate of 4.875% per annum. From June 15, 2020 onward, dividends will accrue at a floating rate equal to three-month LIBOR plus 3.167% per annum.

DTCC may redeem the Series C Preferred Stock at its option, for cash, i) in whole or in part, from time to time, on any dividend payment date on or after June 15, 2020 at a redemption price equal to \$250,000 per share, plus any declared and unpaid dividends to, but excluding the redemption date, or ii) in whole but not in part, at any time within 90 days following a Regulatory Capital Treatment Event, as defined in the Series C Preferred Stock Offering Memorandum, at a redemption price equal to \$250,000 per share, plus any declared and unpaid dividends to, but excluding, the redemption date.

On April 22, 2019 and October 23, 2019, in accordance with the Amended Certificate of Incorporation of DTCC, the Board of Directors approved and declared a dividends in the amount of \$6,093.75 per share on 1,600 shares outstanding of its Series C Preferred Stock. The first semi-annual aggregate dividend of \$9,750,000 was paid on June 17, 2019, to the holders of the Series C Preferred Stock as of record date May 31, 2019. The second semi-annual aggregate dividend of \$9,750,000 will be payable on December 15, 2019, to the holders of the Series C Preferred Stock as of record date November 30, 2019.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

16. SHAREHOLDERS' EQUITY (CONTINUED)

DTC Series A Non-Cumulative Perpetual Preferred stock. Under a plan adopted by the Board of Directors, each Participant of DTC is required to own shares of DTC Series A preferred stock. The ownership of DTC preferred stock is reported as non-controlling interests in the consolidated financial statements. There was \$150,000,000 of DTC Series A preferred stock (1,500,000 shares at par value of \$100 per share) outstanding as of September 30, 2019 and December 31, 2018. Annual dividends are accrued based on the weighted-average rate of interest paid by the Company on required Participants' Fund deposits during the dividend period as disclosed in the DTC's rules. The 2018 annual dividend amount of \$2,340,000 was approved and declared by the Board of Directors in February 2019, and was paid in April 2019, to the holders of DTC Series A Preferred stock during 2018.

17. CAPITAL REQUIREMENTS

The capital requirement for each of the clearing agencies is equal to the sum of the general business risk capital requirement and corporate contribution, as described below. The clearing agencies must meet the capital requirements by holding liquid net assets funded by equity, as described in rule 17Ad-22(e)(15) of the CCAS and the Clearing Agency Policy on Capital Requirements.

General Business Risk Capital Requirement. The general business risk capital requirement is determined according to Rule 17Ad-22(e)(15) of the CCAS and the Clearing Agency Policy on Capital Requirements. The capital requirement is held to cover potential general business losses so that the clearing agencies can continue operations and provide services as a going concern if those losses materialize. It is determined based on the general business risk profile and estimated time to execute a recovery or orderly wind-down of critical operations for each of the clearing agencies and, at a minimum, is equal to six months of operating expenses.

Corporate Contribution. The clearing agencies maintain an amount referred to as the corporate contribution, to be applied to losses as provided in each of the respective clearing agencies rules. The amount of the corporate contribution is generally equal to 50% of each clearing agency's general business risk capital requirement.

Details of the general business risk capital requirement, corporate contribution and liquid net assets funded by equity for the clearing agencies as of September 30, 2019 and December 31, 2018 follow (in thousands):

		2019	
	 DTC	NSCC	FICC
General business risk capital requirement	\$ 171,238	\$ 159,218	\$ 113,727
Corporate contribution	85,619	79,609	56,863
Total requirement	256,857	238,827	170,590
Liquid net assets funded by equity	598,414	515,996	296,382
Excess	\$ 341,557	\$ 277,169	\$ 125,792
		2018	
	 DTC	2018 NSCC	 FICC
General business risk capital requirement	\$ DTC 169,119	\$	\$ FICC 107,845
General business risk capital requirement Corporate contribution	\$	 NSCC	\$
	\$ 169,119	 NSCC 153,054	\$ 107,845
Corporate contribution	\$ 169,119 84,559	 NSCC 153,054 76,527	\$ 107,845 53,922
Corporate contribution Total requirement	\$ 169,119 84,559 253,678	 NSCC 153,054 76,527 229,581	\$ 107,845 53,922 161,767

Regulatory capital. DTCC's regulated subsidiaries maintain and report regulatory capital in accordance with all relevant laws, rules and guidelines. As a multinational enterprise, various DTCC subsidiaries are subject to regulatory capital regimes, as applicable. Certain DTCC subsidiaries submit regulatory capital reports to various regulators, including, but not limited to, FRBNY, the NYSDFS and the Commodity Futures Trading Commission in the United States; Ontario Securities Commission in Canada; and the Monetary Authority of Singapore in Singapore.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE THREE AND NINE MONTHS ENDED SEPTEMBER 30, 2019 AND 2018

17. CAPITAL REQUIREMENTS (CONTINUED)

Capital adequacy. Certain DTCC subsidiaries are subject to capital guidelines issued by United States federal and state banking regulators. During the year DTCC engaged in banking activities under DTC.

DTC capital and leverage ratios filed with the FRBNY and the NYSDFS, and included in DTC's Financial Statements submitted to the SEC as of September 30, 2019 follow:

		Minimum	Well
	Ratio	Capital Ratio ^(a)	Capitalized Ratio ^(a)
Tier 1 capital ratio (1)	81.06%	6.00%	8.00%
Total capital ratio (1)	81.06%	8.00%	10.00%
Tier 1 leverage ratio (2)	19.87%	4.00%	4.00%

- (a) As defined by the regulations issued by the Federal Reserve, Office of the Comptroller of the Currency and the Federal Deposit Insurance Corporation.
- (1) Tier 1 capital ratio primarily includes preferred stock, common stock and retained earnings. DTC's tier 1 capital and total capital ratios are based on tier 1 capital and total risk-weighted assets.
- (2) Tier 1 leverage ratio is based on tier 1 capital and quarterly average total assets.

18. GUARANTEES

FICC and NSCC provide CCP services, including clearing, settlement and risk management services. Acting as a CCP, FICC (through GSD and MBSD) and NSCC guarantee the settlement of trades in the event one or more of their Participants' defaults. A Participant default is defined in the respective rules of NSCC, GSD and MBSD. In their guarantor role, each clearing subsidiary has equal claims to and from Participants, as applicable, on opposite sides of netted transactions. To cover their guarantee risk, FICC (through GSD and MBSD) and NSCC use risk-based margining to collect cash and securities collateral through their Clearing Funds. NSCC's trade guaranty attaches at the point of validation for locked-in submissions, or at the point of comparison and validation for bilateral submissions.

Details for open CCP positions for which a trade guaranty applied as of September 30, 2019 and December 31, 2018 follow (in billions):

	2019	2018
FICC		
GSD	\$ 1,0	99 \$ 1,160
MBSD	4	69 333
NSCC	1	73 176

There were no defaults by Participants to these obligations.

See Note 22 in DTCC's Audited Consolidated Financial Statements for the years ended December 31, 2018 and 2017 for additional information.

19. SUBSEQUENT EVENTS

In October 2019, the Board of Directors authorized revenue rebates to DTC, NSCC, and FICC customers for approximately \$47 million. Customers will receive a rebate based on a pro rata share of qualifying revenues at the legal entity level. Estimated 2019 profitability was used as the basis for the calculation of the rebates, which will be paid in December 2019.

The Company evaluated events and transactions occurring after September 30, 2019 through November 6, 2019, for potential recognition or disclosure in these accompanying Consolidated Financial Statements. Other than disclosed above and in Notes 14 and 16, no additional events or transactions occurred during such period that would require recognition or disclosure in these accompanying Consolidated Financial Statements.